Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME SEMESTER – I (NEW) EXAMINATION – SUMMER 2017

Subject Code:2711302 **Date:09/05/2017**

Subject Name: TRAFFIC ENGINEERING

Time:02:30 P.M. to 05:00 P.M. **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	What is design Hourly Volume? Explain classified traffic volume study at an intersection with sketch.	**07**
	(b)	Explain in brief:	
		I. Co-ordinated signal system	**03**
		II. TSM Techniques	**04**
Q.2	**(a)**	Explain pedestrian flow survey method with the role of data collected in traffic planning and design.	**07**
	(b)	Explain in brief:	
		I. Types of road accident.	**03**
		II. On street parking methods.	**04**
		OR	
	(b)	List out the softwares used in traffic engineering field. Explain simulation in traffic engineering design.	**07**
Q.3	**(a)**	Explain in brief:	
		I. Environmental impact of traffic-Noise pollution.	**03**
		II. Level of Service	**04**
	(b)	What are the types of signal? Discuss steps to calculate signal cycle time.	**07**
		OR	
Q.3	**(a)**	Explain in brief:	
		I. Environmental impact of traffic-Air pollution.	**03**
		II. Highway capacity	**04**
	(b)	Explain relationship between speed, flow and density with sketches.	**07**
Q.4	**(a)**	What are the forms of weaving? State capacity of weaving section as per HCM approach. Also, write about length of weaving section as per volume in PCU.	**07**
	(b)	Explain in brief:	
		I. Vehicular characteristics.	**04**
		II. Regulatory signs.	**03**
		OR	
Q.4	**(a)**	What is saturation flow? Explain the procedure of measuring saturation flow at a signalized intersection.	**07**
	(b)	Write about merging and diverging flow. Discuss their role in traffic related problems and design of facility.	**07**

Q.5	**(a)**	What is PIEV time? Discuss importance of vision, hearing and strength in traffic management as roaduser characteristics.	**07**
	(b)	Explain the terms in brief: Desire line, Spot speed, Delay, Warning sign.	**07**

OR

Q.5	**(a)**	Explain method and type of data collected for origin and destination survey.	**07**
	(b)	Explain in brief:	
		I. Off street parking	**04**
		II. Educational measures to prevent accident.	**03**

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